

## CLAIMS

[1] A vibration sensor comprising a diaphragm electrode having weights attached to opposite surfaces thereof, a first fixed electrode opposed to one surface of the diaphragm electrode and a second fixed electrode opposed to the other surface of the diaphragm electrode,  
5 wherein the vibration sensor outputs vibration signals based on signals obtained from variations of capacitance between the first fixed electrode and the diaphragm electrode and signals obtained from variations of capacitance between the second fixed electrode and the diaphragm electrode.  
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[2] A vibration sensor as defined in Claim 1 further comprising a first electret member attached to a surface of the first fixed electrode opposed to the diaphragm electrode, and a second electret member attached to a surface of the second fixed electrode opposed to the diaphragm electrode, the second electret member having a different polarization potential to the first electret member.  
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20 [3] A vibration sensor as defined in Claim 1 wherein the diaphragm electrode has slits formed in the same plate member and is divided into a diaphragm portion positioned adjacent the center and having the weights attached thereto, a fixed portion positioned peripherally, and resilient supporting portions for connecting the diaphragm portion to the fixed portion.  
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[4] A vibration sensor as defined in Claim 1 wherein the diaphragm electrode is formed of one of stainless steel, 42 alloy, Ti-Cu alloy and Be-Cu alloy.  
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